



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : G01N 21/35		A2	(11) International Publication Number: WO 99/14576 (43) International Publication Date: 25 March 1999 (25.03.99)
<p>(21) International Application Number: PCT/IL98/00458</p> <p>(22) International Filing Date: 17 September 1998 (17.09.98)</p> <p>(30) Priority Data: 121793 17 September 1997 (17.09.97) IL</p> <p>(71) Applicant (<i>for all designated States except US</i>): ORIDION MEDICAL LTD. [IL/IL]; Hamarpe Street 7, 97774 Jerusalem (IL).</p> <p>(72) Inventors; and</p> <p>(75) Inventors/Applicants (<i>for US only</i>): BEN-OREN, Ilan [IL/IL]; Kadish Luz Street 14/80, 96920 Jerusalem (IL). COLMAN, Lewis [IL/IL]; Patal Street 1, 97430 Jerusalem (IL). CARLEBACH, Ephraim [IL/IL]; Har Sinai Street 33, 43307 Raanana (IL). GIRON, Boaz [IL/IL]; Hagdud Hakhamishi Street 7, 97533 Jerusalem (IL). LEVITSKY, Gershon [IL/IL]; Meir Yosha 7/12, 97861 Jerusalem (IL).</p> <p>(74) Agents: SANFORD, T., Colb et al.; Sanford T. Colb & Co., P.O. Box 2273, 76122 Rehovot (IL).</p>		<p>(81) Designated States: AL, AM, AT, AT (Utility model), AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ (Utility model), DE, DE (Utility model), DK, DK (Utility model), EE, EE (Utility model), ES, FI, FI (Utility model), GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK (Utility model), SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).</p>	

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(54) Title: ISOTOPIC GAS ANALYZER

(57) Abstract

An NDIR spectrometer based on the use of wavelength specific lamp sources, whose emission spectrum consists of discrete, narrow lines characteristic of the isotope present in the lamp, and which it is desired to measure with the spectrometer. This allows very high intrinsic sensitivity, enabling the use of an extremely compact absorption cell with a very short path length. In addition, the source can be self-modulated, such that problems associated with external choppers are avoided. Furthermore, there is insignificant cross sensitivity between the isotopes themselves and between the isotopes and other ambient gases in the operating environment.